

Serial No.: 10/577,441
Docket No.: 102-1652T
Amendment dated June 10, 2010
Reply to the Office Action of March 10, 2010

REMARKS

Introduction

Applicants note with appreciation the Examiner's indication that claims 5-12, 18-20, 22-23, and 28 would be allowable if rewritten in independent form, and that claims 21, 24, and 29 would be allowable if rewritten to overcome the rejections under 35 U.S.C. § 112, second paragraph. Applicants also note with appreciation the Examiner's indication that each of the references cited in the Information Disclosure Statement of April 27, 2006 have been considered.

Upon entry of the foregoing amendment, claims 1-30 are pending in the application. Claims 1, 8-12, 21, and 23-29 have been amended. No new matter is being presented. In view of the following remarks, reconsideration and allowance of all the pending claims are requested.

Objections

Specification

The Examiner has objected to claim 23 due to informalities. In particular, the Examiner alleges that "[t]here are two claims 23."

In response, Applicants respectfully submit that claim 23 has been amended in order to address the Examiner's concerns and to further expedite prosecution of the above-identified application. In particular, the second claim 23 has been renumbered as claim 24.

Accordingly, reconsideration and withdrawal of the objection to claim 23 are earnestly solicited.

Drawings

The Examiner has objected to FIG. 1, since the Examiner alleges that FIG. 1 "should be designated by a legend such as --Prior Art—because only that which is old is illustrated."

In response, Applicants have amended FIG. 1 to include a legend which reads "Related Art" in order to address the Examiner's concerns and to further expedite prosecution for the above-identified application.

Accordingly, reconsideration and withdrawal of the objection to FIG. 1 are earnestly solicited.

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Rejection under 35 USC §112, second paragraph

Claims 21, 24, and 29 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Please note that misnumbered claims 24 and 29 have been renumbered 25 and 30, respectively.

With regard to claims 21 and 29, Applicants respectfully submit that claims 21 and 29 have been amended in order to address the Examiner's concerns and to further expedite prosecution for the above-identified application. In particular, claims 21 and 29 have been amended to read "correspond to the plurality of split beams."

With regard to dependent claim 24, Applicants respectfully submit that claim 24 overcomes the 35 U.S.C. § 112, second paragraph, rejection for at least the reasons claim 21, from which claim 24 depends, overcomes the 35 U.S.C. § 112, second paragraph, rejection as pointed out above.

Rejection under 35 USC §103(a)

Claims 1, 13-14, and 25 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Publication No. 2002/0021649 to Yoo et al. (hereinafter, "Yoo") in view of Applicant Admitted Prior Art (FIG. 1) (hereinafter, "AAPA"). Applicants respectfully traverse this rejection for at least the following reasons. Please note that misnumbered claim 25 has been renumbered 26.

a. Independent claims 1, 13, and 26:

With regard to independent claims 1, 13, and 26, on pages 3-5 of the Office Action dated March 10, 2010, the Examiner contends that Yoo in view of AAPA discloses all of the limitations recited in these claims.

However, Applicants respectfully submit that Yoo in view of AAPA fails to teach or suggest all of the features recited in independent claims 1, 13, and 26, for at least the following reasons.

In particular, referring to FIG. 2 of Yoo as relied upon by the Examiner, Yoo merely illustrates an optical pickup having a light device module 50 which emits a first light beam I and a

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second light beam II toward a recording medium 80 through a hologram light coupler 61, an optical changing unit 63, a quarter-wave plate 65, a collimator lens 66, and an objective lens 67. However, Applicants respectfully submit that Yoo fails to teach or suggest, among other things, Applicants' "a hologram module arranged on a light path between the collimating lens and the object lens to split a light which is incident to the recording medium, into a plurality of beams," as recited in independent claim 1 or Applicants' "a hologram module disposed between the collimating lens and the object lens to split a light which is incident to the recording medium, into a plurality of beams," as presently recited in independent claims 13 and 26.

Instead, in contrast with claims 1, 13, and 26 of the present application, FIG. 2 of Yoo illustrates that the hologram coupler 61 (considered by the Examiner as reading on Applicants' "hologram module") is disposed between the light device module 50 (considered by the Examiner as reading on Applicants' "light source module") and the optical path changing unit 63 (considered by the Examiner as reading on Applicants' "light splitting element"). However, Yoo fails to teach or suggest that the hologram light coupler 61 is disposed on a light path *between* the collimator lens 66 (considered by the Examiner as reading on Applicants' "collimating lens") and the objective lens 67 (considered by the Examiner as reading on Applicants' "object lens").

In other words, in contrast with the present application, Yoo describes that the hologram coupler 61 is disposed on a light path between the light source module 50 and the optical path changing unit 63, which is distinctly different than a hologram module arranged on a light path between a collimating lens and an object lens, as claimed.

Moreover, on page 4 of the Office Action, the Examiner contends that AAPA "discloses a hologram module arranged on a light path between the collimating lens and the object lens to split a light which is incident to the recording medium, into a plurality of beams." However, Applicants respectfully disagree.

In particular, referring to FIG. 1 of AAPA as relied upon by the Examiner, AAPA merely illustrates a collimating lens 40 arranged on a light path between a complex prism 30 (considered by the Examiner as reading on Applicants' "light splitting element") and a reflecting mirror 45, and a polarized light hologram element 50 (considered by the Examiner as reading on Applicants' "hologram module") arranged on a different light path between the reflecting mirror 45 and the object lens 60.

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However, Applicants respectfully submit that AAPA fails to teach or suggest that the polarized light hologram element 50 is arranged on a light path between the collimating lens 40 and the object lens 60 to split a light *which is incident* to the recording medium into a plurality of beams, as similarly recited in claims 1, 13, and 26. Instead, in contrast with claims 1, 13, and 26 of the present application, AAPA merely illustrates, at best, that the polarized light hologram element 50 is arranged on a first light path between the reflecting mirror 45 and the object lens 60 to split a light *which is reflected* by a disk 100.

More specifically, AAPA describes that the polarized hologram element 50 operates “only in response to the p-polarized light” and that the polarized hologram element 50 converts “a reflection light from the disk 100 to the p-polarized light.” (See AAPA, paragraph 0007). As a result, in AAPA, the split refraction light is formed on a photodetector right away. Therefore, AAPA cannot be construed as teaching or suggesting that the polarized light hologram element 50 is arranged on a light path between the collimating lens 40 and the object lens 60 to split a light *which is incident* to the disk 100 into a plurality of beams, as similarly recited in claims 1, 13, and 26. In other words, AAPA fails to teach or suggest that a split incident light is formed on the disk 100 by the polarized hologram element 50.

Thus, Applicants respectfully submit that Yoo and AAPA, either alone or in combination, fails to teach or suggest, among other things, Applicants’ “a hologram module arranged on a light path between the collimating lens and the object lens to split a light which is incident to the recording medium, into a plurality of beams,” as recited in independent claim 1 or Applicants’ “a hologram module disposed between the collimating lens and the object lens to split a light which is incident to the recording medium, into a plurality of beams,” as recited in independent claims 13 and 26.

Accordingly, since Yoo and AAPA, either alone or in combination, fails to teach or suggest all of the elements set forth in independent claims 1, 13, and 26, these claims are patentably distinguishable over Yoo and AAPA, either alone or in combination. Thus, Yoo and AAPA cannot be properly used to reject independent claims 1, 13, and 26 under 35 U.S.C. §103(a), and withdrawal of this rejection and allowance of these claims are respectfully solicited.

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b. Dependent claim 14:

It is respectfully submitted that claim 14 depends from independent claim 13, which is patentable over Yoo and AAPA, either alone or in combination, for at least the reasons pointed out above. Accordingly, for at least the reason that claim 14 incorporates all of the limitations of independent claim 13, claim 14 is also allowable over Yoo and AAPA, either alone or in combination.

Rejection under 35 USC §103(a)

Claims 2-3, 15-16, and 26 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Yoo and AAPA in view of U.S. Patent Publication No. 2003/0235127 to Lee et al. (hereinafter, "Lee"). Applicants respectfully traverse this rejection for at least the following reasons. Please note that misnumbered claim 26 has been renumbered 27.

With regard to dependent claims 2-3, 15-16, and 27, Applicants respectfully submit that for at least the reason that these claims respectively depend from allowable independent claims 1, 13, and 26, and therefore contain each of the features recited in claims 1, 13, or 26, claims 2-3, 15, 16, and 27 are also patentable over Yoo in view of AAPA.

Moreover, since the Examiner cites Lee merely to allege that this patent discloses "a monitor photo-detector arranged to adjust a magnitude of the light emitted from the first and second light sources," Lee does not cure the deficiencies of Yoo and AAPA, as pointed out above. Thus, claims 2-3, 15-16, and 27 are also allowable over Yoo, AAPA, and Lee, either alone or in combination.

Therefore, Applicants respectfully submit that Yoo, AAPA, and Lee, either alone or in combination, fail to teach or suggest, among other things, Applicants' "a hologram module arranged on a light path between the collimating lens and the object lens to split a light which is incident to the recording medium, into a plurality of beams," as recited in independent claim 1 or Applicants' "a hologram module disposed between the collimating lens and the object lens to split a light which is incident to the recording medium, into a plurality of beams," as recited in independent claims 13 and 26. Therefore, claims 2-3, 15-16, and 27 are also allowable over Yoo, AAPA, and Lee, either alone or in combination.

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Accordingly, withdrawal of these rejections and allowance of these claims are earnestly solicited.

Rejection under 35 USC §103(a)

Claims 4, 17, and 27 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Yoo, AAPA, and Lee in view of U.S. Patent Publication No. 2004/0105374 to Ogasawara et al. (hereinafter, "Ogasawara"). Applicants respectfully traverse this rejection for at least the following reasons. Please note that misnumbered claim 27 has been renumbered 28.

With regard to dependent claims 4, 17, and 28, Applicants respectfully submit that for at least the reason that these claims respectively depend from allowable independent claims 1, 13, and 26, and therefore contain each of the features recited in claims 1, 13, or 26, claims 4, 17, and 28 are also patentable over Yoo, AAPA, and Lee, either alone or in combination.

Moreover, since the Examiner cites Ogasawara merely to allege that this patent discloses "a polarized light hologram is divided into a first hologram and a second hologram which are operated in response to the light rays emitted from the first light source, the first and second holograms being formed on the same plane in a semicircular shape and located one on the other," Ogasawara does not cure the deficiencies of Yoo, AAPA, and Lee, as pointed out above.

Thus, Applicants respectfully submit that Yoo, AAPA, Lee, and Ogasawara, either alone or in combination, fail to teach or suggest, among other things, Applicants' "a hologram module arranged on a light path between the collimating lens and the object lens to split a light which is incident to the recording medium, into a plurality of beams," as recited in independent claim 1 or Applicants' "a hologram module disposed between the collimating lens and the object lens to split a light which is incident to the recording medium, into a plurality of beams," as recited in independent claims 13 and 26. Therefore, claims 4, 17, and 28 are also allowable over Yoo, AAPA, Lee, and Ogasawara, either alone or in combination.

Accordingly, withdrawal of these rejections and allowance of these claims are earnestly solicited.

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Allowable Subject Matter

Applicants note with appreciation the Examiner's indication that claims 5-12, 18-20, 22-23, and 28 would be allowable if rewritten in independent form. However, in view of the reasons pointed out above for overcoming the rejections of independent claims 1, 13, and 26, Applicants respectfully submit that claims 5-12, 18-20, 22-23, and 28 which respectively depend from claims 1, 13, and 25, are also allowable, without amendment. Please note that misnumbered claims 23 and 28 have been renumbered 24 and 29, respectively.

In addition, Applicants respectfully note with appreciate that claims 21, 24, and 29 would be allowable if rewritten to overcome the rejections under 35 U.S.C. § 112, second paragraph. As such, since Applicants have amended claims 21, 24, and 29 to overcome the 35 U.S.C. § 112, second paragraph, rejections, claims 21, 24, and 29 are deemed allowable.

Accordingly, withdrawal of these objections and allowance of these claims are earnestly solicited.

Conclusion

It is respectfully submitted that a full and complete response has been made to the outstanding Office Action and, as such, there being no other objections or rejections, this application is in condition for allowance, and a notice to this effect is earnestly solicited.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided below.

If any further fees are required in connection with the filing of this amendment, please charge the same to our Deposit Account No. 502827.

Respectfully submitted,

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